ORIGINAL ARTICLE

Re-engineering the Public Hospital System: Saving the Safety Net

BRUCE SIEGEL, MD, MPH*

Abstract. *Cities across America are grappling with the problem of how to provide care for the indigent and those on Medicaid. All levels of government are reducing their public funding for health care of indigent persons, and the rapid growth of managed care is making traditional cost-shifting more difficult as it transforms the practice of medicine itself. These issues are most acute in cities like Los Angeles and New York, which traditionally have relied on public hospital systems to serve as a safety net. This article focuses on the changes being wrought at the largest health-care system in the country for indigents, the New York City Health and Hospitals Corporation (HHC), on the progress it made during the first 18 months of a major re-engineering process, and on potential options for its future reform.*

While managed care and funding cuts have shaken the entire health-care industry, the changes that public hospitals must make are qualitatively and quantitatively unique. Public hospitals serve a disproportionate share of the uninsured, underinsured, and Medicaid populations. They derive the bulk of their revenues from Medicaid and other forms of public funding. This money and, to a much lesser extent, that from Medicare and private insurers, has enabled the hospitals to shift costs so they can fulfill their mission to treat people in need, regardless of ability to pay.

In many cities, the loss of these dollars threatens to, or already has, caused the restructuring of public health services, sometimes to the point of elimination. State funding cuts in Tennessee have caused the only city hospital in Memphis to eliminate its cardiac, oncology, and AIDS units. Chicago is replacing its 918-bed hospital with a smaller, 464-bed facility and some small outpatient clinics. Boston is merging its newly built city hospital with Boston

* Dr. Siegel is President and Chief Executive Officer, Tampa General Healthcare, Davis Islands, P. O. Box 1289, Tampa, Florida 33601.

University Medical Center. The District of Columbia General Hospital has been forced to cut 250 of its 410 beds; has fired 10% of its employees (including 60 doctors); and has reduced significantly its specialty and emergency departments. The District's busiest trauma center, where 85% of the patients are uninsured, may have to be closed as well.[1] Los Angeles is planning to cut 75% of the outpatient services at its six county hospitals, while closing all of its six comprehensive health centers and 29 of its 39 community clinics.

With a growing number of states transferring their Medicaid patients into managed-care plans, public, private, and voluntary institutions are now competing with one another for Medicaid patients. Whereas the privates and voluntaries struggle with the adjustment to managed care, the publics have the additional burden of learning how to compete.

The New York City Health & Hospitals Corporation

New York City's Health and Hospitals Corporation is the country's largest public hospital system, consisting of eleven acute-care facilities; six diagnostic and treatment centers; six long-term care facilities; dozens of community-based clinics and home health agencies; the citywide Emergency Medical Service, the busiest ambulance service in the country; and MetroPlus, HHC's Medicaid health maintenance organization (HMO). HHC employs approximately 41,000 people and has an annual operating budget of approximately $3.4 billion. HHC has been the medical safety net for New Yorkers, where uninsured and Medicaid patients know they will receive treatment. Currently, Medicaid accounts for approximately 74% of HHC's revenues.

HHC's facilities provide an enormous percentage of the health care in a city with exceptionally high rates of serious illness. New York City's AIDS incidence rate is more than five times higher than that of the country as a whole. Its tuberculosis (TB) rate is approximately four and one-half times the national rate; homicides

are almost three times more common; and infant mortality rates are about 20%.[2] In the neighborhood of Harlem, which is served by Harlem Hospital Center and other facilities in HHC's North Manhattan Network, the infant mortality rate in 1988 was reported to be 75% more than in the rest of New York City.[3]

Within this context, HHC provides approximately 50% of New York City's outpatient care, 20% of its inpatient care, and 40% of its emergency care. Because HHC serves the poorest and sickest New Yorkers, it handles about 50% of the city's AIDS cases, 40% of its TB cases, and about 60% of its psychiatric treatment. A disproportionately high percentage of its patients are alcohol or substance abusers.

Corporate Restructuring

Over the past 2 years, America's largest public hospital system has undergone rapid change. In an attempt to adapt to a competitive market that will be driven largely by Medicaid managed care, and to adjust to reimbursement cuts, HHC moved forward several initiatives. These include the creation of vertically integrated networks; the dramatic downsizing of its work force; decentralization of decision making; the use of stringent financial and quality measures; redefining the Corporation's relationship with physicians; and an aggressive stance toward managed care.

Networks

In mid-1994, HHC configured its vast array of citywide facilities and services into six vertically integrated health-care networks. These networks serve a number of purposes. They improve the quality of patient care by facilitating more-efficient planning and use of resources, ultimately providing a more comprehensive and accessible continuum of care for HHC's patients. They enable formerly disconnected facilities to work cooperatively, making the Corporation more competitive and financially solvent. The networks have also allowed the decentralization of decision-making authority away from HHC's central office, placing it closer to where care is delivered.

The networks already have generated cost savings as facilities combine their clinical services and maximize economies of scale by consolidating personnel, finance, payroll, and purchasing functions. In fiscal year (FY) 1995, HHC was able to close a projected $450-million deficit through such consolidations. With networks, the system can adapt to one locality's decreasing demand for a particular service without entirely eliminating access to patients who still need it. Streamlining corporate and facility operations frees up more of HHC's limited resources for critical primary-care services.

The actual configuration of each network was determined by local market analysis according to the needs of the communities it served and the ability of all facilities in the network to enhance each other's services. With so many facilities spread out over such a large area, the Corporation had to navigate numerous and varied political and community interests involved in these decisions.

Downsizing

HHC has always maintained a Central Office, which, at times, has had over 2,000 employees. To give more authority to the networks, Central Office functions have been consolidated and decentralized, and areas of responsibility streamlined. The result of these changes was that of the 1,300 Central Office positions existing in early 1994, 652 remain; by the fall of 1995 this number was expected to be 450. This should result in a savings of about $40 million per year. Downsizing of the Central Office has been matched by corporatewide downsizing (including hospital staff). During this same period, HHC has contracted by almost 7,000 full-time-equivalent (FTE) positions because of several factors: attrition, several employee buy-out programs, and layoffs of managers. This should save the Corporation approximately $250 million annually.

Measuring Financial Performance

Because the bulk of HHC's revenues is derived from inpatient care, the transition to managed care challenges its medical practi-

tioners and administrators. In FY 1995, only $50 million in revenue was generated under managed-care contracts. However, the State of New York plans to mandate enrollment of virtually all Medicaid patients in managed care. This has grave implications for HHC, which derives three-fourths of its revenue from Medicaid. The Corporation must be able to operate in a capitated environment, otherwise it will rapidly become insolvent.

In early 1994, senior corporate staff identified key indicators of financial performance and developed a system of tracking them on a monthly basis. Utilization, length of stay, cost per day and cost per visit, and number of covered lives are among the measures tracked. This regular periodic report on the Corporation's financial vital signs shows that HHC is progressing toward its long-term goals, while maintaining its short-term financial viability. Between July 1, 1994 and June 30, 1995, total facility utilization increased because the growth in outpatient visits (3%), primary care visits (8%), and ambulatory surgery visits (3%) outweighed the concurrent decline in inpatient discharges (-2%) and emergency room visits (-0.5%). Thus, HHC facilities were used more, and in a manner consistent with the demands of managed care.

During this same period, HHC's productivity increased by 10%, a result of increased use combined with a diminished work force. More-aggressive efforts by financial counselors at the facilities to enroll Medicaid-eligible patients resulted in greater Medicaid revenues. Patient revenues on the whole have risen over the last 2 years, growing from $3.0 billion in FY 1993, to $3.5 billion in FY 1994, and were expected to increase again in FY 1995.

The Corporation's progress toward the new culture is reflected in the systemwide decrease in average length of stay (ALOS). The HHC corporatewide average for January 1994 was 8.6 days (excluding psychiatric and rehabilitation admissions). By June 1995, HHC's monthly average had dropped to 6.6 days. This dramatic decrease moves HHC closer to national standards and away from New York City's traditionally excessive ALOS rates. With the drop in length of stay, HHC has been able to close over 1,000 beds since early 1994.

Measuring Quality and Other Success Factors

Quality of care and other non-financial indicators became even more critical in an atmosphere of rapid downsizing. The Board of HHC, as well as many of HHC's professional staff, were very concerned that quality and employee morale would suffer in this environment. To monitor this, nine "key indicators" were chosen to be tracked monthly. These include:

1. **Ambulatory Care Sensitive Conditions (ACS) Index:** ACS conditions are those diagnoses for which timely and effective outpatient care could reduce the risk of hospitalization by preventing the onset of an illness or condition, controlling an acute episodic illness or condition, or managing a chronic disease or condition. This report tracks the percentage of discharges for those diagnoses previously and specifically identified as ACS conditions.[4]

2. **First trimester prenatal care:** The report tracks the percentage of new prenatal enrollees who are in their first trimester of pregnancy.

3. **Availability of medical records:** This indicator measures the percentage of medical charts ordered in advance of a visit that are available at the time of the appointment.

4. **Absentee rate:** This report measures the percentage of workday hours that staff is working in the facility.

5. **Customer satisfaction indicators:** This information will become available when surveys are fully prepared, distributed, and completed. The current target date for completion of the first survey results is early 1996.

6. **Waiting time:** This report measures the waiting time for new, non-urgent appointments with a primary-care provider.

7. **Readmission rates:** A measure of rates of admission within a defined time for the same major diagnostic category.

8. **Voluntary disenrollments from MetroPlus:** Tracks the rate of voluntary disenrollment from HHC's Medicaid HMO; it is used as a surrogate measure for customer satisfaction.

9. **Primary care treatable visits to the emergency depart-**

ment: This indicator will measure the percentage of emergency visits for conditions considered treatable in a primary-care setting.

Before the development of these indicators and forms, the Corporation had no means of comparing the performance of its facilities to each other. Now management can look at corporate-wide performance trends and focus on facilities or departments that are particularly troublesome. Whereas previously the Board would dwell on individual, serious risk-management cases, now it can assess the strengths, weaknesses, and progress of each facility and can use the most successful ones to advise the others on improving performance. These performance indicators and standardized reports also allow for the comparison of HHC performance against national and local standards.

Redesigning Physician Services

Like many public hospitals throughout the Unites States, HHC hires its doctors and other medical staff through affiliation agreements with medical schools and voluntary teaching hospitals. (Two of the contracts are with private physician corporations). In FY 1995, HHC paid a total of $535 million under these contracts. A chief concern is the productivity of affiliated doctors, which internal studies suggest is significantly lower than that of the average US physician.

So far the data have shown that the productivity of HHC physicians is about half that of national managed-care standards. While HHC's clientele may be more time-consuming to treat, it still seems that HHC physician productivity is low. In some parts of the Corporation, primary-care physicians are engaged in only 1,000 patient encounters per year, as opposed to a national standard of about 4,000 per year. In its current renegotiations of the affiliation contracts, the Corporation seeks to create incentives for greater productivity by tying providers' income to their productivity. Clear quality standards are also to be included, as well as agreements to shrink costly specialty residency programs. HHC expects to be able to save $50 to $100 million annually by recon-

figuring these relationships. This should leave it with a smaller, better-paid cadre of providers.

Managed Care

In January 1991, New York State had 63,000 Medicaid recipients in enrolled in managed-care plans. By March 1995, the number had increased by 733%, to 525,332. The rate and total volume of this growth accelerated with each year, so that while only 30,000 Medicaid recipients enrolled in managed care from January, 1991 to January 1, 1992, over 230,000 did so between January 1994 and March 1995 (unpublished quarterly data, New York Department of Social Services, March 1995).

HHC's first inroad into managed care was the HMO it established in 1985 to save the financially floundering Metropolitan Hospital Center. The need for HHC to enter the managed-care arena did not become pressing until 1991, when state legislation targeted the voluntary enrollment into managed care of 50% of all Medicaid enrollees by 1997. For the first time, HHC had competitors for its Medicaid patients. In early 1994, New York State had 3.2 million Medicaid enrollees, 500,000 of whom were in managed-care plans. Newly elected Governor George Pataki applied at that point for federal approval to move to mandatory enrollment of all Medicaid recipients by the spring of 1998. This intensified the competition among Medicaid managed-care organizations and posed a dire threat to HHC's revenue stream. But although HHC's HMO had expanded to cover more HHC facilities by the beginning of calendar year 1994, it was only the sixth-largest Medicaid HMO in a field of 15 in New York City, with 16,572 members, and was viewed within the Corporation primarily as an afterthought.

In early 1994 the plan, renamed MetroPlus, became the Corporation's priority. HHC hired an advertising agency to develop a major image campaign for the HMO, committing $1.86 million in FY 1994 to fund the effort, and another $3.8 million in FY 1995. For the first time, an HHC organization used telemarketing, direct

mail, radio, newspaper, and mass-transit advertising campaigns. The colorful, high-quality ads contained both English and Spanish text and were aimed primarily at the Medicaid patients whose retention is vital to the continued financial viability of the hospitals.

As a result of this campaign, enrollment nearly quadrupled, to over 66,000, as it became the second-largest, and fastest-growing, Medicaid HMO in the city. Enrollment was suspended temporarily in April 1995 when it became clear that HHC's primary-care infrastructure was not providing the level of service demanded by a managed-care environment. Three other Medicaid HMOs in New York also suspended enrollment. Most of the problems centered around long waits for appointments and closed physician panels. Enrollment was expected to be reopened in early autumn, 1995.

At the same time, HHC has aggressively marketed its services to other HMOs. The Corporation's previous policy of not doing business with outside HMOs severely limited its ability to maximize its managed-care revenues. Since then, HHC has signed agreements with several national and local HMOs, and plans to conclude many others. These alliances allow HHC to use its considerable resources to serve the enrollees of other HMOs and to strengthen its own market position.

Conclusion

Like all hospital systems, HHC is functioning in an extremely difficult, transitional environment, with the adjustment to managed care occurring while facilities still need inpatient revenues to survive. For public hospitals, this challenge is made all the more formidable by the withdrawal of government funding for the poor and uninsured and by a political climate favoring privatization. While HHC successfully closed a $450-million budget gap in FY 1995, it now faces massive Medicaid and other cuts that amounted to $400 million in FY 1996. In FY 1995, Medicaid funded 72% of HHC's discharges.

HHC faces the prospect of even more change. Mayor Rudolph Giuliani's plan to sell three of the city's hospitals was buoyed by the 1995 report of a blue ribbon panel he formed to advise him on HHC's future. The panel's report urged dissolution of HHC and the transfer to the city's voluntary hospitals of the responsibility for most of the health care for indigents, with the potential exception of some remaining "essential community provider" hospitals.

The City of New York now faces a critical question: Should it continue to be a direct provider of health services? Although the changes in HHC may have better positioned it for the short term, it is still not clear that a publicly owned, 11-hospital system is the optimal structure for indigent care in New York.

Several options present themselves. The first is to continue to try to "rationalize" the existing HHC through downsizing of its inpatient capacity, expansion of its primary-care capacity, cutting costs, and increasing the number of covered lives. Although this helps, it begs the question of whether the city should own the system. In recent years the city has reduced its direct subsidy to HHC by 40%, so that today only about 6% of HHC's budget is based on that subsidy. It is also clear that the tie to New York City makes it more difficult for HHC to manage its labor relations, to make controversial closure decisions, and in general to operate as any other health-care system would. Given these parameters, the creation of a truly independent, not-for-profit health-care system divorced from the city administration may make sense. Such a system could make difficult labor and service decisions, including closure of unnecessary facilities, with less political interference. It would be free to pursue innovative service and finance initiatives, such as joint ventures with for-profit organizations, and even employee ownership.

Such a system might be organized around the MetroPlus HMO, rather than around a shrinking hospital system. The HMO would have a safety-net mission: it could enroll a variety of patients, even uninsured individuals, if public dollars could be diverted for that purpose. Brecher and Spiezio have already proposed a similar model.[5] MetroPlus would be free to use any type of facility in the

city, as long as it maintained open access. This would maintain the necessary mission of an HHC without tying any entity to maintaining HHC's entire infrastructure as it is currently configured.

This option raises other questions. If policymakers can conceive of an indigent-care system without explicit support of public hospitals *per se*, can they can also conceive of a system without *any* explicit institutional subsidies? Currently, New York State's rate-setting system includes a mix of bad-debt and charity-care payments, mainly to hospitals. At least two alternatives exist.

One would be the subsidy of individuals to allow their purchase of insurance. This could take the form of an insurance mechanism for the uninsured, using current bad-debt and charity-care expenditures. This concept is already being tried in some form in New Jersey. New Jersey has earmarked $50 million of former charity-care funding in 1995 for such a program and had enrolled approximately 10,000 individuals as of August 1995. The hope is that such a managed-care experiment will eventually promote better health through prevention, and will be cheaper than funding only acute-care services for sick, uninsured people.

Another alternative would be the creation of some purchasing mechanism to use these same dollars to buy services in a competitive fashion from providers (regardless of ownership) that will provide them efficiently to the medically indigent. While this may evoke unpleasant memories of the Clinton Administration's managed-competition approach, it still may be a viable alternative to the current approach of paying a historically determined set of hospitals for these services. Indeed, it might allow government to contract directly with low-cost community physicians for outpatient services. These physicians might then be placed "at risk" for high levels of inpatient use. This would probably spark, in New York, the first organization of non-academic physicians into a coherent provider entity. It would be an historic opportunity to shift away from an indigent-care paradigm dependent or relatively expensive public and voluntary teaching hospitals.

The last two options are by no means "foolproof." In both cases, the care of the indigent will still be subject to the budgetary

decisions of local, state or federal government. Both assume that there will be enough resources to either provide a subsidy sufficient to allow individuals to purchase insurance, or to pay providers enough to want to bid on the care of the indigent. These are major assumptions, and our experience of Medicaid reductions over the past few years does not encourage us to believe that government would sufficiently fund these options.

The New York Mayor's blue ribbon panel proposed selling most of HHC, while possibly leaving some hospitals to be "essential community providers," perhaps as freestanding not-for-profit entities. Whereas this would also remove the city from the business of running hospitals, it might also leave several weak hospitals that require continuing special subsidies. Such institutions would not have any of the benefits of "economies of scale" that a system may have. Should those remaining "safety net" hospitals have to take an even greater share of the indigent and very ill, the financial exposure of the city might even increase. The state might lose even more flexibility as a purchasor. Health-care workers might also find working in such institutions less attractive than ever.

One could envision a future in which all of HHC has been eliminated by sale or transfer to other parties, no identifiable "safety net" mechanism or public hospitals remain, and few or no institutional or insurance subsidies are available. With the clear surplus of inpatient capacity in New York, many see this as a viable alternative. However, without financial restructuring to entice the remaining institutions and providers to care for the indigent, the state and city would eventually be forced to "police" the health-care industry to prevent and punish "dumping." Hospitals and clinics would, on the other hand, have every incentive to engage in just that sort of behavior except for the fear of regulatory sanctions. This scenario seems to end in a grave deterioration of access and/or the creation of new regulatory bureaucracies. It hardly seems an attractive direction, regardless of one's ideology.

Given these constraints, the most feasible option may be the devolution of HHC into a smaller, more efficient urban health-care system that separates itself from New York City financially

and administratively. Such a system would, over time, become increasingly a managed-care provider. With a mission of open access, without the constraints of government, the system could make rational investment and service decisions and better perform HHC's current mission. Government and taxpayers would have a more efficient safety net, while the indigent would still be assured of some degree of health-care access.

Whatever the outcome, it is clear that America's major public systems are entering a period of radical change. A well-planned transition for these organizations could leave a less costly safety net of some sort in place. An unplanned, chaotic series of events could leave a growing number of America's medically indigent with even fewer options.

Acknowledgments

The author thanks Rebecca Rothman, JD and Ms. Sue Kaplan for their assistance in preparing this article.

References

1. Sack K. Public hospitals around country cut basic services. *New York Times*, August 20, 1995.
2. Andrulis DR, Ginsberg C, Shaw-Taylor Y, Martin V. *Urban Social Health*: Washington, DC: National Public Health and Hospital Institute, December 1995, pp. 118, 136, 157.
3. Goldman B. Improving access to the underserved through Medicaid managed care. *J Health Care for the Poor and Underserved.* 1993;4(3):293.
4. Billings J, Zeitel L, Lukomnik J, Carey TS, Blank AE, Newman L. Impact of socioeconomic status on hospital use in New York City. *Health Affairs*. Spring 1993, p. 162.
5. Brecher C, Spiezio S. *Privatization and Public Hospitals: Choosing Wisely for New York City*. New York: Twentieth Century Fund, 1995.